

N E On page 9, line 20, change “cover” to --covers--.

On page 11, line 1, change "Patent Claims" to

--What Is Claimed Is:--.

In the Claims:

Please cancel claims 1-22, without prejudice. Please also enter the following new claims.

23. (New) A device for determining an extent of an at least locally lateral undercut of a structured surface layer on a sacrificial layer, comprising:
at least one passive electronic component arranged on the structured surface layer and for determining a physical measured quantity that is proportional to the extent of the lateral undercut.
24. (New) The device according to claim 23, wherein the physical measured quantity corresponds to one of:
a capacitance,
one of an absorbed intensity and an emitted intensity of an electromagnetic emission,
one of an absorbed frequency and an emitted frequency, and
one of an absorbed frequency spectrum and an emitted frequency spectrum of the electromagnetic emission.
25. (New) The device according to claim 24, wherein:
the one of the absorbed frequency and the emitted frequency corresponds to a resonance frequency.
26. (New) The device according to claim 23, further comprising:
at least one transmitter for emitting a first signal;

24. (New) The device according to claim 23, wherein the physical measured quantity corresponds to one of:
- a capacitance,
 - one of an absorbed intensity and an emitted intensity of an electromagnetic emission,
 - one of an absorbed frequency and an emitted frequency, and
 - one of an absorbed frequency spectrum and an emitted frequency spectrum of the electromagnetic emission.

25. (New) The device according to claim 24, wherein:
the one of the absorbed frequency and the emitted frequency
corresponds to a resonance frequency.

26. (New) The device according to claim 23, further comprising:
at least one transmitter for emitting a first signal;

27. (New) The device according to claim 26, wherein the physical measured quantity is determined from one of:

a difference between the first signal and the second signal.

(New) The device according to claim 1, wherein the at least one transmitter and the at least one receiver are integrated in an assembly.

the assembly includes a processing unit.

(New) The device according to claim 1, wherein the at least one transmitter is at the same time also the at least one receiver.

the first signal includes one of:

an intensity of an electromagnetic emission,

a high-frequency power output that is emitted one of continuously and in pulses and emitted into the at least one passive electronic component, the high-frequency power output having one of a preestablished frequency and a preestablished frequency spectrum, and

a sequence of one of chirped high-frequency pulses and broadband noise pulses of the electromagnetic emission, and the second signal includes one of:

- a second voltage,
- one of an absorbed intensity and an emitted intensity of the electromagnetic emission, and
- one of a frequency and a frequency spectrum of the electromagnetic emission.

32. (New) The device according to claim 31, wherein:
the frequency of the electromagnetic emission corresponds to a resonance frequency.
33. (New) The device according to claim 23, wherein:
the at least one passive electronic component includes a coil delineated out in the structured surface layer and including a first coil end and a second coil end,
the coil and a base layer arranged with respect to the structured surface layer and the sacrificial layer form a capacitor having a capacitance proportional to the extent of the lateral undercut.
34. (New) The device according to claim 33, wherein:
the coil forms an oscillating circuit having a resonance frequency f_0 , and a change Δf_0 is proportional to the extent of the lateral undercut.
35. (New) The device according to claim 33, wherein:
a plated through-hole extends through the sacrificial layer,
the plated-through hole connects one of the first coil end and the second coil end to the base layer.

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36. (New) The device according to claim 33, wherein:
at least one of the first coil end and the second coil end is dimensioned in an extent thereof such that a complete undercut of the at least one of the first coil end and the second coil end does not occur.
37. (New) The device according to claim 23, wherein:
the structured surface layer, at least in an area of the at least one passive electronic component, is separated from a base layer by the sacrificial layer.
38. (New) The device according to claim 37, wherein a structure of the base layer corresponds to one of:
a material including one of silicon and polysilicon, and
a silicon wafer.
39. (New) The device according to claim 23, wherein:
the structured surface layer, at least in an area of the at least one passive electronic component, is at least weakly electrically conductive and is composed of one of silicon, polysilicon, a surface-metallized silicon, a doped silicon, a surface-metallized polysilicon, and a doped polysilicon.
40. (New) The device according to claim 23, wherein:
the sacrificial layer, at least in an area of the at least one passive electronic component, is electrically insulating and includes a silicon oxide layer.
41. (New) The device according to claim 23, wherein:
the structured surface layer includes trenches that extend in depth down to the sacrificial layer.

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42. (New) The device according to claim 41, wherein:
the trenches border a structure, to be undercut, in the structured surface layer.
43. (New) A method for determining an extent of a lateral undercut of a structured surface layer on a sacrificial layer, comprising the steps of:
performing a first etching operation to provide at least locally to the structured surface layer a structure including trenches, wherein the first etching operation includes the step of:
locally additionally delineating at least one passive electronic component out of the structured surface layer;
performing a second etching operation that begins from the trenches and generates at least locally the lateral undercut of the structured surface layer;
undercutting the at least one passive electronic component in response to the undercutting of the structured surface layer; and
in response to the undercutting of at least one of the structured surface layer and the at least one passive electronic component, causing the at least one passive electronic component to determine a physical measured quantity proportional to the extent of the lateral undercut.
44. (New) The method according to claim 43, wherein:
the step of performing the first etching operation occurs through a masking.
45. (New) The method according to claim 43, further comprising the step of:
applying the sacrificial layer on a base layer.
46. (New) The method according to claim 43, wherein:
the step of delineating occurs through an etching of the trenches.